International Scientific and Technical Conference “Smart Energy Systems 2019”

Preface

We are delighted to present the Proceedings of the International Scientific and Technical conference on Smart Energy Systems, SES 2019, which took place in Kazan, Russian Federation in September 2019, and was co-organized by Peter the Great St. Petersburg Polytechnic University and Kazan State Energy University. Our conference continues the tradition of energy, environment and economics symposia that have been regularly held in Kazan for the last century by the Kazan school of Power Engineers and Thermophysicists. The goal of our event was a complex analysis and discussion of fundamental problems of thermal and electrical energy, energy supply, reliability of large energy systems, and development of new energy systems and technologies.

Smart energy systems is a new and rapidly developing area in modern energy where power electronics meets IT. Currently their implementation becomes an important instrument in realization of the Energy Strategy of the Russian Federation as they can ensure energy safety of the country and its regions, increase the efficiency of the energy complex potential, minimize negative impact on the environment, climate and public health, and stimulate competition and transparent pricing policies.

During the conference both respected and young scientists have discussed around 200 projects divided into four sections devoted to the areas of energy systems and complexes, electromechanics and electric apparatus, automation, devices and control methods in the energy sector, economics and industry management.

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Finally, we thank all our participants who have done an invaluable contribution to our conference and to the industry.

Shamsutdinov E.V.,
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